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PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	:	Attorney Docket No. 2004_1542A
Alan M. SAWYER et al.	:	**Confirmation No. 9045**
Serial No. 10/511,148	:	Group Art Unit 1643
Filed December 2, 2004	:	Examiner Hong Sang
METHOD FOR PRODUCING MONOCLONAL ANTIBODIES	:	**Mail Stop: AMENDMENT**

DECLARATION UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Dr. Thomas Joos, the undersigned, a citizen of Germany, residing at , Eichhaldenstrasse 55 in Tuebingen, Germany, do hereby declare:

1. That I graduated from the Eberhard Karls Universität Tübingen with a degree in Biochemistry.
2. PhD in Biology (Dr. rer. nat) at the Max Planck Institute of DevelopmentalBiology, Department of Cell biology, Prof. P. Hausen: "Integrin-α5 during early embryogenesis of Xenopus laevis"
3. Scientific Advisory "Biochipnet" (www.biochipnet.de):
   At the NMI, Reutlingen, Germany, I was initiating "The BioChipNet database" in the year 2000. The BioChipNet database" is a comprehensive and searchable information platform on microarrays and related fields such as microfluidics and bioinformatics.

   related references:
   Joos T, Bachmann J. Protein microarrays: potentials and limitations. Front Biosci. 2009 Jan 1;14:4376-85.
   Hartmann M, Roeraade J, Stoll D, Templin MF, Joos TO. Protein microarrays for diagnostic assays. Anal Bioanal Chem. 2009 Mar;393(5):1407-16.
   Hsu HY, Joos TO, Koga H. Multiplex microsphere-based flow cytometric platforms for protein analysis and their application in clinical proteomics - from assays to results. Electrophoresis. 2009 Dec;30(23):4008-19.
   Hsu, H.Y., S. Wittemann, and T.O. Joos, Miniaturized parallelized sandwich immunoassays. Methods Mol Biol, 2007. 428: p. 247-62.
   Taussig MJ, Stoevesandt O, Borrebaeck CA, Bradbury AR, Cahill D, Cambillau C, de

The Commissioner is authorized to charge any deficiency or to credit any overpayment associated with this communication to Deposit Account No. 23-0975.

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Thus, as shown above, I am a person of skill in the art in the field of U.S. Application No. 10/511,148.

I have carefully examined the specification and claims of this application. Further, I have carefully examined the rejection in item 5 on pages 3-6 of the final Office Action with a mail date of June 23, 2009. It is my expert opinion and belief that a skilled artisan, based on the references cited in this rejection, would not arrive at the claimed invention. In particular, it is my expert opinion and belief that, based on the references cited in this rejection, a person of skill in the art in this field would not have realized that the claimed high-throughput method could be obtained with its inherent advantages for high-throughput production and screening of monoclonal antibodies against large numbers of antigens simultaneously.

In particular, I note that the claimed invention is directed towards a high-throughput method for providing a plurality of monoclonal antibodies each of which binds to a different candidate antigen comprising (1) introducing a plurality of purified candidate antigens into an animal or animals; (2) recovering antibody producing cells from said animal or animals, rendering the cells into single cell suspensions and generating immortalized cell lines from said single cell suspensions; (3) screening the supernatant of said immortalized cell lines against a protein chip on which purified candidate antigens are displayed; (4) and selecting monoclonal antibodies that bind to said candidate antigens.

I note that in order to arrive at the claimed invention from the teachings cited by the Examiner, a person of skill in the art would have to (1) substitute the homogenized cell extract of Chen with purified candidate antigens, (2) substitute the monoclonal antibodies of Chen on the chip with the purified antigens of the claimed invention and (3) replace the detection method of Chen, which comprises adding an antigen and a polyclonal antibody to the chip of Chen, with the streamline process of merely adding supernatant of the immortalized cell lines of the claimed invention.

I note that the Examiner utilizes the teachings of Rava to motivate a skilled artisan to substitute the monoclonal antibodies on the chip taught in Chen with a chip having purified antigens on the surface. However, a person of skill in the art, reading Rava would be confronted with a large number of options for probes on a peptide chip.

It is my expert opinion and belief that without the insight of the inventors, a person of skill in the art would not choose to display purified antigens on the surface of a chip in order to obtain a high-throughput method for producing a plurality of monoclonal antibodies.

I further note that Klessing, Poethke and Hu suggest immunizing animals with plurality of antigens. However, a skilled artisan would not be motivated to use a plurality of purified antigens in the method of Chen unless such skilled artisan realized the advantages of a high-throughput method for producing a plurality of monoclonal antibodies using a chip with purified antigens on its surface. It is my expert opinion and belief a person of skill in the art would not make such realization based on the cited references.

Thus, it is my expert opinion and belief that based on the references cited in the above-noted rejection, person of skill in the art would not have realized the claimed invention.

Finally, I note that as someone of skill in the art, the claimed invention has considerable advantages over the methods of producing monoclonal antibodies that are currently available. Such advance in monoclonal antibody production is highly significant as it dramatically reduces cost and time periods associated with such antibody production. Given such enormous advantages of the claimed invention, it is further my expert opinion and belief that if such method was obvious to a skilled artisan based on the references cited by the Examiner, such method would have been obtained at an earlier date by another inventor.

I further declare that all statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

18. Dez. 2009

Date

Signature of Declarant